

What is claimed is:

- 1 1. A process executed on a computer for defining services listed in an IT services
2 catalog, comprising the steps:
 - 3 (1) displaying a plurality of icons or menu choices which can be selected to
4 start the process of creating a new service, or modifying a preexisting service and/or
5 resource, or define cost information or define a service action;
 - 6 (2) if an icon or menu choice is selected to start the process of creating a
7 new service, displaying one or more displays soliciting information from a user to
8 name the service and define the fields and contents thereof for a data structure
9 which defines an instance of said service and define attributes of each field including
10 validation constraints and validation formulas, and receiving and storing any data
11 entered by a user in response to said displays;
 - 12 (3) if an icon or menu choice is selected to start the process of defining a
13 relationship, displaying one or more displays soliciting information as to which
14 preexisting service or IT resource to which the data structure of a service will point
15 and receiving and storing any data entered by a user in response to said displays so
16 as to allow a hierarchy of services to be defined by entry of said pointers;
 - 17 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
18 information, displaying one or more displays which solicit the user to enter information
19 that define the name of a cost information formula and the cost information formula
20 itself, and receiving and storing any data entered by a user in response to said
21 displays; and
 - 22 (5) if an icon or menu choice is selected indicating a user wishes to define a
23 service action, displaying one or more displays that solicit the name of the service
24 action to be defined and to define the fields and contents thereof for a data structure
25 which defines an instance of said service action and attributes for each field, and
26 receiving and storing any data entered by a user in response to said displays, said
27 one or more displays also allowing a user to enter pointer data which defines
28 relationships between service actions in a hierarchy of service actions to create,
29 modify or destroy instances of services.

1 2. The process of claim 1 wherein the process of creating each field in a data
2 structure allows text, numbers or formulas to be stored in the field as if the field were a
3 spreadsheet cell, and further comprising the steps of determining if a user is a high level or
4 low level user and, if a high level user has logged in who needs the assistance of building
5 blocks or primitives, displaying a palette of building blocks which the user can use to define
6 services or service actions or relationships therebetween, and receiving user input
7 regarding which building blocks the user wishes to combine and how the user wishes to
8 combine them, and then using the data in the data structures of the building blocks to
9 populate the fields of the data structure of the service or service action the user is attempting
10 to define.

1 3. The process of claim 1 wherein the process of creating each field of a data
2 structure allows attributes to be defined for each field which define whether the field is
3 configurable, whether the data of a field can be overridden by new data entered by a user,
4 and which define constraints for the field in the form of formulas that define maximum and/or
5 minimum limits for a field or which define a property which must be true about the content of
6 said field.

1 4. The process of claim 2 wherein the process of creating each field of a data
2 structure allows attributes to be defined for each field which define whether the field is
3 configurable, whether the data of a field can be overridden by new data entered by a user,
4 and which define constraints for the field in the form of formulas that define maximum and/or
5 minimum limits for a field or which define a property which must be true about the content of
6 said field.

1 5. The process of claim 1 wherein step 2 further comprises the steps of:
2 displaying one or more displays which solicit the user to enter data defining:
3 a database model which defines the information stored in a data
4 structure that defines an instance of said service;
5 one or more relationship fields each of which contains a pointer to
6 another IT service and/or resource which said IT service is an extension of or
7 which will be utilized in said IT service;

8 one or more cost information fields each of which which records
 9 formulas that are used to compute the cost of implementing or using said
 10 service;
 11 one or more service action fields, each of which contains a pointer to
 12 a data structure which defines an instance of a service action, each service
 13 action defining an action that can be taken when a service is used such as
 14 create, modify or delete.

1 6. The process of claim 5 wherein step 5 of creating one or more service action
 2 data structures comprises the steps of:
 3 defining one or more models that define the information that is stored in a
 4 database or data structure which define an instantiation of said service action;
 5 defining one or more relationship fields which contain pointers to other service
 6 actions or resources so as to define a heirarchy of service actions if any;
 7 defining one or more fields which contain formulas for computing the cost to
 8 perform said service action one time;
 9 defining one or more fields that contain schedule information or a formula to
 10 compute an approximate time to complete a service action and/or how soon said
 11 service action can start;
 12 defining a field that contains a pointer to a fulfillment workflow data structure
 13 and defining said fulfillment workflow structure in the form of a specification of the
 14 steps that need to be performed to accomplish said service action and the order, if
 15 any, in which the steps need to be performed;
 16 defining one or more fields that contain validation logic in the form of
 17 constraints on the values of one or more fields and/or validation formulas to determine
 18 whether a value in a field satisfies a constraint; and
 19 defining one or more fields that contain an approval workflow in the form of a
 20 specification of the steps that need to be performed to accomplish approval by
 21 management to carry out said service action.

1 7. The apparatus of claim 6 wherein said step of defining said data structure of said
 2 fulfillment workflow includes the steps of defining the physical and/or logical resources
 3 which will be required to accomplish each step in said workflow.

1 8. The apparatus of claim 6 wherein said step of defining said data structure of said
2 fulfillment workflow includes the steps of defining the particular IT professional or the skill set
3 needed by an IT professional to accomplish each manual task in said fulfillment workflow.

1 9. A computer programmed to carry out the following steps:

2 (1) displaying a plurality of icons or menu choices which can be selected to
3 start the process of creating a new service, establishing a relationship between a
4 new service and a preexisting service and/or resource, define cost information or
5 define a service action;

6 (2) if an icon or menu choice is selected to start the process of creating a
7 new service, displaying one or more displays soliciting information from a user to
8 name the service and define the fields and contents thereof for a data structure
9 which defines an instance of said service and define attributes of each field including
10 validation constraints and validation formulas, and receiving and storing any data
11 entered by a user in response to said displays;

12 (3) if an icon or menu choice is selected to start the process of defining a
13 relationship, displaying one or more displays soliciting information as to which
14 preexisting service or IT resource to which the data structure of a service will point
15 and receiving and storing any data entered by a user in response to said displays;

16 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
17 information, displaying one or more displays which solicit the user to enter information
18 that define the name of a cost information formula and the cost information formula
19 itself, and receiving and storing any data entered by a user in response to said
20 displays; and

21 (5) if an icon or menu choice is selected indicating a user wishes to define a
22 service action, displaying one or more displays that solicit the name of the service
23 action to be defined and to define the fields and contents thereof for a data structure
24 which defines an instance of said service action and attributes for each field, and
25 receiving and storing any data entered by a user in response to said displays.

1 10. The computer of claim 9 further programmed to carry out the following steps
2 when carrying out step 2:

3 displaying one or more displays which solicit the user to enter data defining:
4 a database model which defines the information stored in a data
5 structure that defines an instance of said service;
6 one or more relationship fields each of which contains a pointer to
7 another IT service and/or resource which said IT service is an extension of or
8 which will be utilized in said IT service;
9 one or more cost information fields each of which which records
10 formulas that are used to compute the cost of implementing or using said
11 service;
12 one or more service action fields, each of which contains a pointer to
13 a data structure which defines an instance of a service action, each service
14 action defining an action that can be taken when a service is used such as
15 create, modify or delete.

1 11. The computer of claim 10 further programmed to carry out the following steps
2 when carrying out step 5 to define a service action:
3 defining one or more models that define the information that is stored in a
4 database or data structure which define an instantiation of said service action;
5 defining one or more relationship fields which contain pointers to other service
6 actions or resources;
7 defining one or more fields which contain formulas for computing the cost to
8 perform said service action one time;
9 defining one or more fields that contain schedule information or a formula to
10 compute an approximate time to complete a service action and/or how soon said
11 service action can start;
12 defining a field that contains a fulfillment workflow in the form of a
13 specification of the steps that need to be performed to accomplish said service action
14 and the order, if any, in which the steps need to be performed;
15 defining one or more fields that contain validation logic in the form of
16 constraints on the values of one or more fields and/or validation formulas to determine
17 whether a value in a field satisfies a constraint; and

18 defining one or more fields that contain an approval workflow in the form of a
19 specification of the steps that need to be performed to accomplish approval by
20 management to carry out said service action.

1 12. A computer readable medium having computer-executable instructions for
2 performing a method comprising:

3 (1) displaying a plurality of icons or menu choices which can be selected to
4 start the process of creating a new service, establishing a relationship between a
5 new service and a preexisting service and/or resource, define cost information or
6 define a service action;

7 (2) if an icon or menu choice is selected to start the process of creating a
8 new service, displaying one or more displays soliciting information from a user to
9 name the service and define the fields and contents thereof for a data structure
10 which defines an instance of said service and define attributes of each field including
11 validation constraints and validation formulas, and receiving and storing any data
12 entered by a user in response to said displays;

13 (3) if an icon or menu choice is selected to start the process of defining a
14 relationship, displaying one or more displays soliciting information as to which
15 preexisting service or IT resource to which the data structure of a service will point
16 and receiving and storing any data entered by a user in response to said displays;

17 (4) if an icon or menu choice is selected indicating a user wishes to enter cost
18 information, displaying one or more displays which solicit the user to enter information
19 that define the name of a cost information formula and the cost information formula
20 itself, and receiving and storing any data entered by a user in response to said
21 displays; and

22 (5) if an icon or menu choice is selected indicating a user wishes to define a
23 service action, displaying one or more displays that solicit the name of the service
24 action to be defined and to define the fields and contents thereof for a data structure
25 which defines an instance of said service action and attributes for each field, and
26 receiving and storing any data entered by a user in response to said displays.

1 13. The computer readable medium of claim 12 wherein said computer-executable
2 instructions include instructions to perform the following steps when performing step 2 of the
3 method:

4 displaying one or more displays which solicit the user to enter data defining:

5 a database model which defines the information stored in a data
6 structure that defines an instance of said service;

7 one or more relationship fields each of which contains a pointer to
8 another IT service and/or resource which said IT service is an extension of or
9 which will be utilized in said IT service;

10 one or more cost information fields each of which which records
11 formulas that are used to compute the cost of implementing or using said
12 service;

13 one or more service action fields, each of which contains a pointer to
14 a data structure which defines an instance of a service action, each service
15 action defining an action that can be taken when a service is used such as
16 create, modify or delete.
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1 14. The computer readable medium of claim 13 wherein said computer-executable
2 instructions include instructions to perform the following steps when performing step 5 of the
3 method:

4 defining one or more models that define the information that is stored in a
5 database or data structure which define an instantiation of said service action;

6 defining one or more relationship fields which contain pointers to other service
7 actions or resources;

8 defining one or more fields which contain formulas for computing the cost to
9 perform said service action one time;

10 defining one or more fields that contain schedule information or a formula to
11 compute an approximate time to complete a service action and/or how soon said
12 service action can start;

13 defining a field that contains a fulfillment workflow in the form of a
14 specification of the steps that need to be performed to accomplish said service action
15 and the order, if any, in which the steps need to be performed;

16 defining one or more fields that contain validation logic in the form of
17 constraints on the values of one or more fields and/or validation formulas to determine
18 whether a value in a field satisfies a constraint; and
19 defining one or more fields that contain an approval workflow in the form of a
20 specification of the steps that need to be performed to accomplish approval by
21 management to carry out said service action.